

**APPENDIX IV**

Serial No.: 09/520,032

Docket No.: 49933US031

---

Office Action mailed from the U. S. Patent and Trademark Office on May 23,  
2001.

---



UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR NAME OF INTELLECTUAL PROPERTY COUNSEL	ATTORNEY DOCKET NO.
09/521,032	03/06/00	INFORMANT	115030521/031

05/27/0523

WILLIAM D. ALLEN  
OFFICE OF INTELLECTUAL PROPERTY COUNSEL  
OF INNOVATIVE PROPERTIES COMPANY  
P.O. BOX 20427  
SEASIDE, MN 55103-2427

EXAMINER
----------

ART UNIT	PAPER NUMBER
----------	--------------

DATE MAILED:

05/23/01

05/23/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/520,032

Applicant(s)

HOOPMAN ET AL.

Examiner

Joseph Leyson

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-132 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 55-87 and 112-132 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-54 and 88-111 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 6, 7.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-13, drawn to a master tool, classified in class 425, subclass 470.
- II. Claims 14-54 and 88-111, drawn to a production tool, classified in class 425, subclass 470.
- III. Claims 55-87 and 112-132, drawn to a method of making a production tool, classified in class 264, subclass 219.

DIVD 48  
11-2301

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as apparatus and product made. The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)).

In this case, the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product which is not a production tool such as an abrasive article or a reflector, or the product as claimed can be made by another and materially different

apparatus such as a stereo lithography apparatus or an apparatus including cutting means for forming the production tool.

3. Inventions III and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as a process which does not include creating a design wherein the production tool is made in a random fashion such as by cutting randomly or by randomly placing elements on a substrate.

4. Inventions III and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another materially different apparatus such as a stereo lithography apparatus or an apparatus including cutting means for forming the production tool.

---

Art Unit: 1722

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Ann Muetting on 17 May 2001 a provisional election was made with traverse to prosecute the invention of Group II, claims 14-54 and 88-111. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-13, 55-87 and 112-132 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

8. The status of the parent cases on p. 1 of the disclosure should be updated, i.e. now abandoned or now U.S. Patent No. #.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

---

Art Unit: 1722

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 16, 17 and 19-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 should be made depend upon claim 15 because claim 16 recites "said geometrical shapes" which are first recited by claim 15.

Claim 17 recites "a value from 25° and 90°" which is incorrect and should be changed to --a value from 25° to 90°--

Claim 19 is indefinite. Claim 19 recites a production tool but has NO limitations for the production tool. Note that claim 19 appears to be a product by process claim, but the steps of making the product(the production tool) are NOT recited.

Claims 20 and 21 are indefinite because the production tool does NOT comprise a roll. The production tool can be in the form of a roll or a coating roll. The examiner suggests changing "comprises" in both claims 20 and 21 to --which is--.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

---

Art Unit: 1722

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

12. Claims 14-16, 18, 22-24, 29-32, 88-93 and 97 are rejected under 35 U.S.C. 102(e) as being anticipated by Calhoun(-754).

Calhoun(-754) teaches a production tool 30 made of metal or polymeric film (col. 9, lines 55-62) and having three-dimensional cavities with any shape such as the geometrical shapes of cubes, pyramids, and truncated pyramids (col. 10, lines 31-51). The cavities can also be of different sizes and/or shapes (col. 6, lines 60-65), and therefore each cavity can have a boundary defined by at least four planar surfaces wherein adjacent planar surfaces of one cavity meet at an edge to define an angle of intersection therebetween wherein at least one angle of intersection of a first cavity is different from all angles of intersection of a second cavity, and various cavities can have angles, base edge lengths or any dimension different from all the other various cavities.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

Art Unit: 1722

the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 17, 25-28 and 94-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun(-754).

Calhoun(-754) discloses the production tool substantially as claimed except for a material-included angle from 25 to 90 degrees or for the specific percentage of pairs with different dimensions, as recited by the instant claims. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool of Calhoun(-754) with a material-included angle from 25 to 90 degrees or with adjacent cavity pairs with various percentages

---

Art Unit: 1722

having different dimensions because Calhoun(-754) discloses that the cavities can have different sizes, because Calhoun(-754) discloses that the cavities can be non-uniformly distributed (col. 6, lines 27-68) and/or because such dimensions and percentages would have been found due to routine engineering in finding operable ranges for the production tool. Furthermore, the specification contains no disclosure of either the critical nature of these dimensional and percentage requirements or any unexpected results arising therefrom, and as such these requirements would be arbitrary and therefore obvious.

Applicants must show that these requirements are critical. In re Woodruff, 16 USPQ 2d 1934.

16. Claims 20, 33-35, 40-46, 51-54, 98-100, 104-107 and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun(-754) in view of Pieper et al.(-917).

Calhoun(-754) discloses the production tool substantially as claimed except for the production tool being a coated roll or an engraved metal roll. Pieper et al.(-917) disclose a production tool being a coating roll or an engraved metal roll (col. 9, lines 13-35). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool of Calhoun(-754) to be a coating roll or an engraved metal roll because it is notoriously well

---

Art Unit: 1722

known and conventional in the art for a production tool to be a coating roll or a metal engraved roll as recited by Pieper et al.(-917).

17. Claims 36-39, 47-50, 101-103 and 108-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calhoun(-754) as applied to claims 17, 25-28 and 94-96 above, and further in view of Pieper et al.(-917) .

Pieper et al.(-917) disclose a production tool being a coating roll or an engraved metal roll (col. 9, lines 13-35). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool of Calhoun(-754) to be a coating roll or an engraved metal roll because it is notoriously well known and conventional in the art for a production tool to be a coating roll or a metal engraved roll as recited by Pieper et al.(-917).

18. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

---

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

19. Claim 19 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15 and 16 of U.S. Patent No. 6,129,540. Although the conflicting claims are not identical, they are not patentably distinct from each other because instant claim 19 merely eliminates elements from the production tool of claims 15 and 16 of U.S. Patent No. 6,129,540. Elimination of an element and its function is an obvious expedient if the remaining elements perform the same functions as before, In re Karlson, 136 USPQ 184.

20. Claim 21 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15 and 16 of U.S. Patent No. 6,129,540 in view of Pieper et al.(-917). Claims 15 and 16 of U.S. Patent No. 6,129,540 disclose the production tool substantially as claimed except for the production tool being a coating roll. Pieper et al.(-917) disclose a production tool being a coating roll (col. 9, lines 13-16). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the production tool of claims 15 and 16 of U.S. Patent No. 6,129,540 to be a coating roll because it is notoriously well known and

---

Art Unit: 1722

conventional in the art for a production tool to be a coating roll as recited by Pieper et al.(-917).

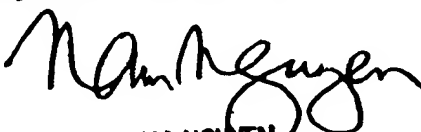
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Leyson whose telephone number is (703) 308-2647. The examiner can normally be reached on M-F(8:30-6:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (703) 308-3322. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-7718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*jl*

jl  
May 21, 2001

  
NAM NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700